

N^o 280



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PROVISIONAL SPECIFICATION.

An Improved Vaporizer or Fumigator.

I, GEORGE CUPIT FOWLER, of 58 Louisville Road, Upper Tooting, in the County of London, Manufacturing Chemist, do hereby declare the nature of this invention to be as follows:—

5 The invention has for its object an improved vaporizer or fumigator which will effectually vaporize the liquid employed for fumigation without the risk of setting fire to or injuring such liquid when the latter has become thoroughly heated or is vaporizing.

10 For this purpose I use an outer shell, preferably of metal, which has perforations or openings as usual at the lower part to supply air to the lamp or burner in the interior thereof, and perforations or openings in the upper part with or without a crenulated top for the exit of the heated air and products of combustion. The top may be surmounted by a ring shaped deflector for further security. The shell may be simply placed over the lamp or burner, or it may have an opening, closable by a door, through which the lamp or burner is inserted.

15 According to my invention, with a view to prevent the flame passing to and firing the vapor given off from the liquid or firing the contents of the container, I interpose between the lamp and the fluid container a diaphragm, which may be solid or may be made of perforated metal or wire gauze. When solid, it is preferably made of asbestos, and when using a solid diaphragm, outlet openings
20 are formed in the body of the shell below such diaphragm in addition to openings above the latter. The diaphragm may be either fixed or removably mounted on or in the outer shell or it may be carried by the liquid container.

The liquid container is preferably of such form as to cause the liquid therein to gravitate towards the centre, and it is preferably carried at a short distance
25 above the diaphragm.

The outer shell may be made in two parts adjustable telescopically in order to permit of regulation of the heat transmitted to the fluid container.

The invention is also applicable to the use of fumigating material sold in a solid form.

30 Dated this 5th day of January, 1904.

HARRIS & MILLS,
23 Southampton Buildings London, W.C.,
Agents.

COMPLETE SPECIFICATION.

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An Improved Vaporizer or Fumigator.

I, GEORGE CUPIT FOWLER, of 58 Louisville Road, Upper Tooting, in the County of London, Manufacturing Chemist, do hereby declare the nature of this inven-

[Price 8d.]

Fowler's Improved Vaporizer or Fumigator.

tion and in what manner the same is to be performed; to be particularly described and ascertained in and by the following statement;—

The invention has for its object an improved vaporizer or fumigator which will effectually vaporize the liquid employed for fumigation without the risk of setting fire to or injuring such liquid when the latter has become thoroughly 5 heated or is vaporizing.

My invention is illustrated in the accompanying drawings, in which;—

Fig. 1 is a vertical section showing one form of apparatus.

Fig. 2 is a vertical section showing another method of carrying the invention 10 into effect, and

Fig. 3 is a section of part of an apparatus showing another modification.

In carrying the invention into effect I use an outer shell *a*, which may be of conical form as shown in Figs. 1 and 3, or of cylindrical form as shown in Fig. 2. This shell *a* has perforations or openings *a*¹ as usual to supply air to the lamp 15 or burner *b* in the interior thereof, and perforations or openings *a*² in the upper part for the exit of the heated air and products of combustion. The shell *a* may further be provided, as shown in Fig. 1, with a crenulated top *a*³. The shell *a* may simply be placed over the spirit or other lamp *b*, or it may have an opening, which may be provided with a door *c* as shown in Fig. 1, through which the lamp 20 or burner *b* is inserted.

With a view to prevent the flame passing to and firing the vapor given off from the liquid, or firing the contents of the container *d*, I interpose between the lamp *b* and the fluid container *d*, a diaphragm *e*. In Fig. 1 I have shown such a diaphragm made of perforated metal or wire gauze fixed in position on 25 the shell *a* by means of rivets *e*¹ passing through the flange *e*² of the diaphragm *e*. In Fig. 2 I have shown a solid diaphragm, preferably made of asbestos, resting loosely on a ring *f* carried by the shell *a*. When employing a solid diaphragm I form the shell *a* with outlet openings *a*⁴ below such diaphragm, in addition to the openings *a*² or crenulated top *a*³. It will be understood that either a per- 30 forated or solid diaphragm may be used with the conical or cylindrical form of the apparatus.

The top of the shell *a* may be surmounted, as shown in Figs. 1 and 2, with a ring-shaped deflector *g* for further security; or the deflector *g* may be carried by the container *d* as shown in Fig. 3.

The container *d* is preferably of such a form, as shown in Fig. 2, to cause the 35 liquid therein to gravitate towards the centre, and it is preferably provided with projections or bars *h* to rest on the diaphragm *e*, thereby preventing the bottom of the container coming in contact with the diaphragm *e* and causing the container *d* to be carried at a short distance above the diaphragm *e*. The projections 40 or bars *h* may be carried by the diaphragm instead of by the container, or the container and position of the diaphragm may be so arranged that they cannot come into contact with each other but are situated at a short distance apart. I preferably arrange the container at a short distance above the diaphragm by one of the methods hereinbefore described, as by so doing there is less risk of 45 setting fire to or injuring the fumigating material, but I do not limit the invention to that particular construction as, when the bottom of the container is in contact with the diaphragm, this latter will to a large extent protect the fumigating material.

In the case of a shell *a* of cylindrical form the diaphragm *e* may well be carried by the container *d*, the container, projections or bars and the diaphragm 50 being rivetted together.

In Fig. 2 I have shown a telescopic shell *a* made of two cylindrical parts fitting together with sufficient friction to carry the upper part at any desired height above the lamp *b*, thereby enabling the heat transmitted to the fluid container *d* to be regulated. If desired one of the parts may be provided as shown with a 55 number of small holes *a*⁵ and the other part may be provided with a single hole

Fowler's Improved Vaporizer or Fumigator.

for a peg a^6 to be passed through the two parts to obviate the risk of them slipping with relation to each other after they have been adjusted.

The invention may also be used with fumigating material sold in a solid form.

5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. The combination with a vaporizer or fumigator having an outer shell, perforations in said outer shell, and a container carried by said shell, of a perforated
10 or solid diaphragm located between the lamp or burner and the bottom of the container, substantially as set forth.

2. The combination with a vaporizer or fumigator having a shell, perforations in said shell, and a container carried by said shell, of a diaphragm located between the lamp or burner and the bottom of the container and a deflector
15 located around the upper part of the shell, substantially as set forth.

3. In a vaporizer or fumigator, the combination of a shell, a container carried by said shell, a solid diaphragm located between the lamp and the container, and perforations in the shell immediately below said solid diaphragm.

4. A vaporizer or fumigator the shell of which is made of two or more parts
20 telescopic with relation to each other, substantially as set forth.

5. In a vaporizer or fumigator, the combination of a shell, a container carried by said shell, and a diaphragm carried by said container, substantially as described.

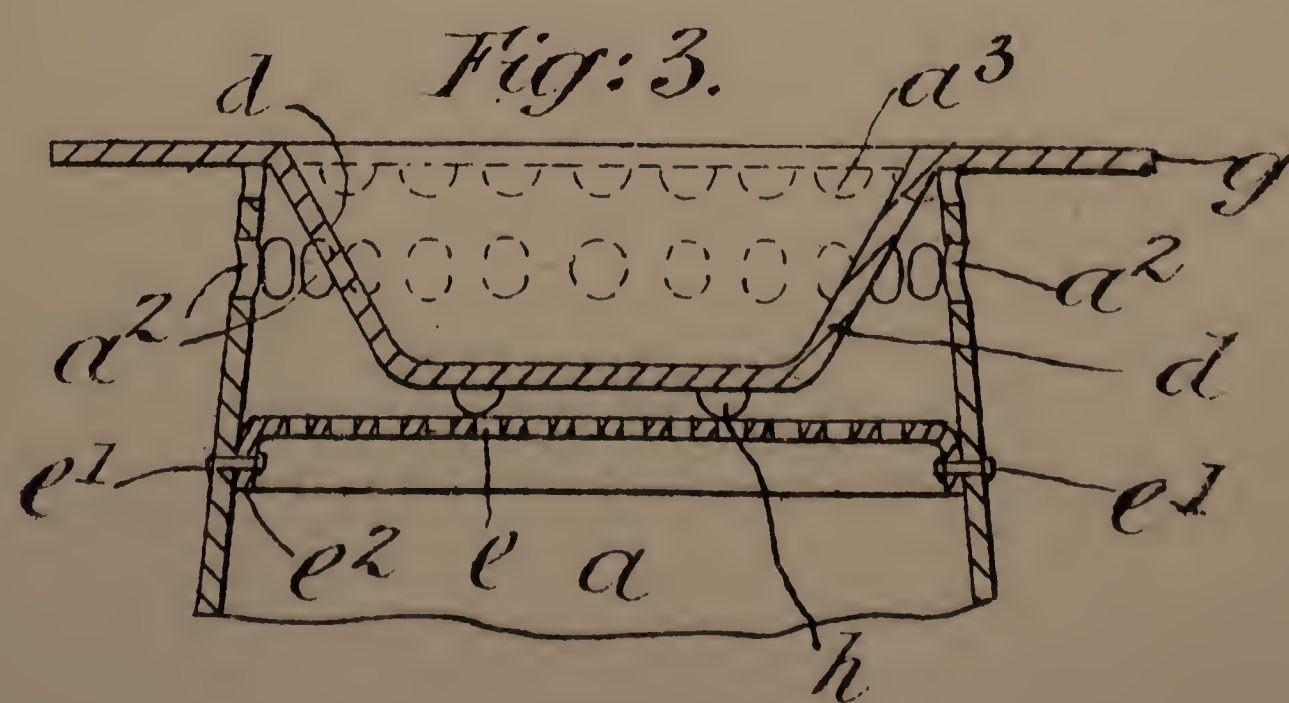
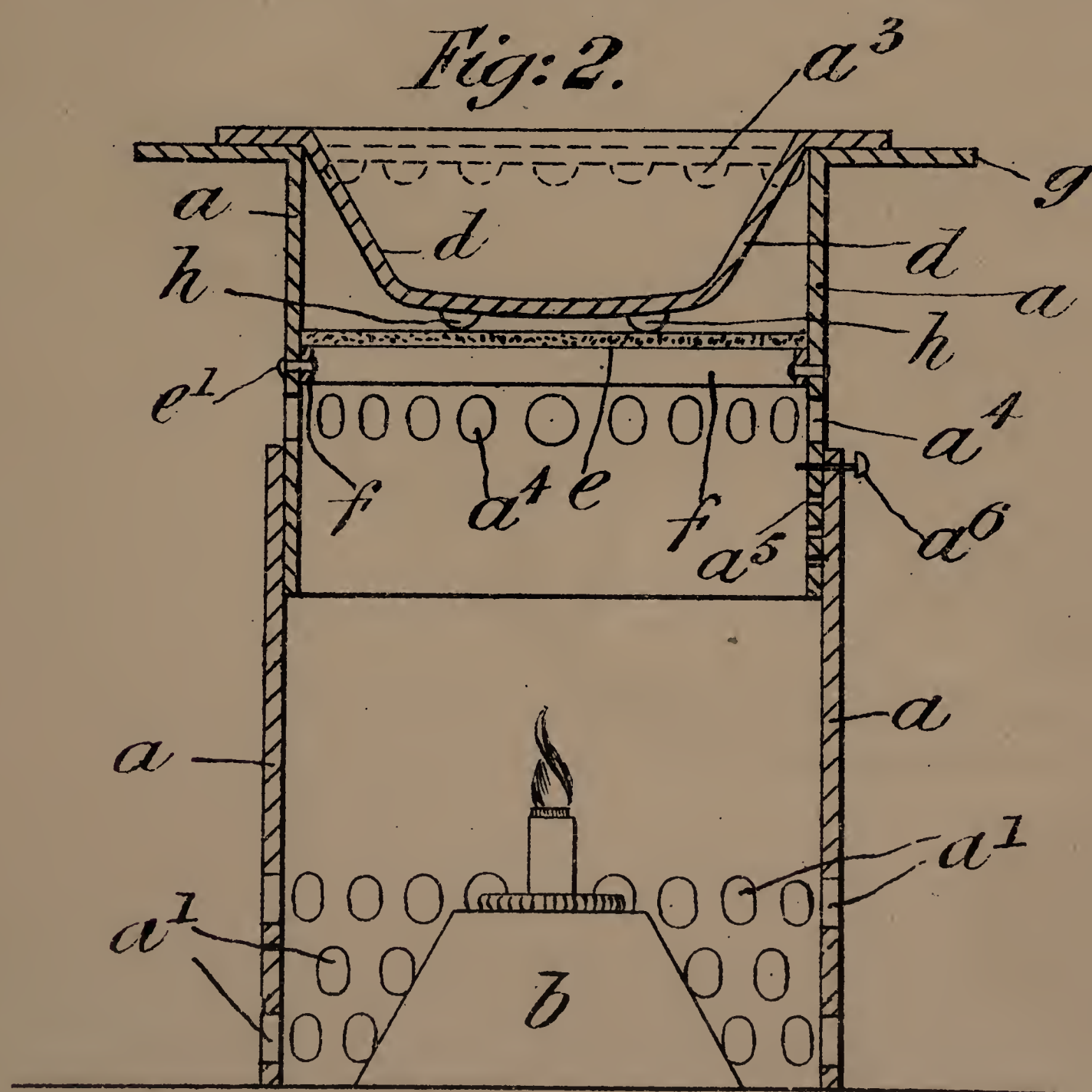
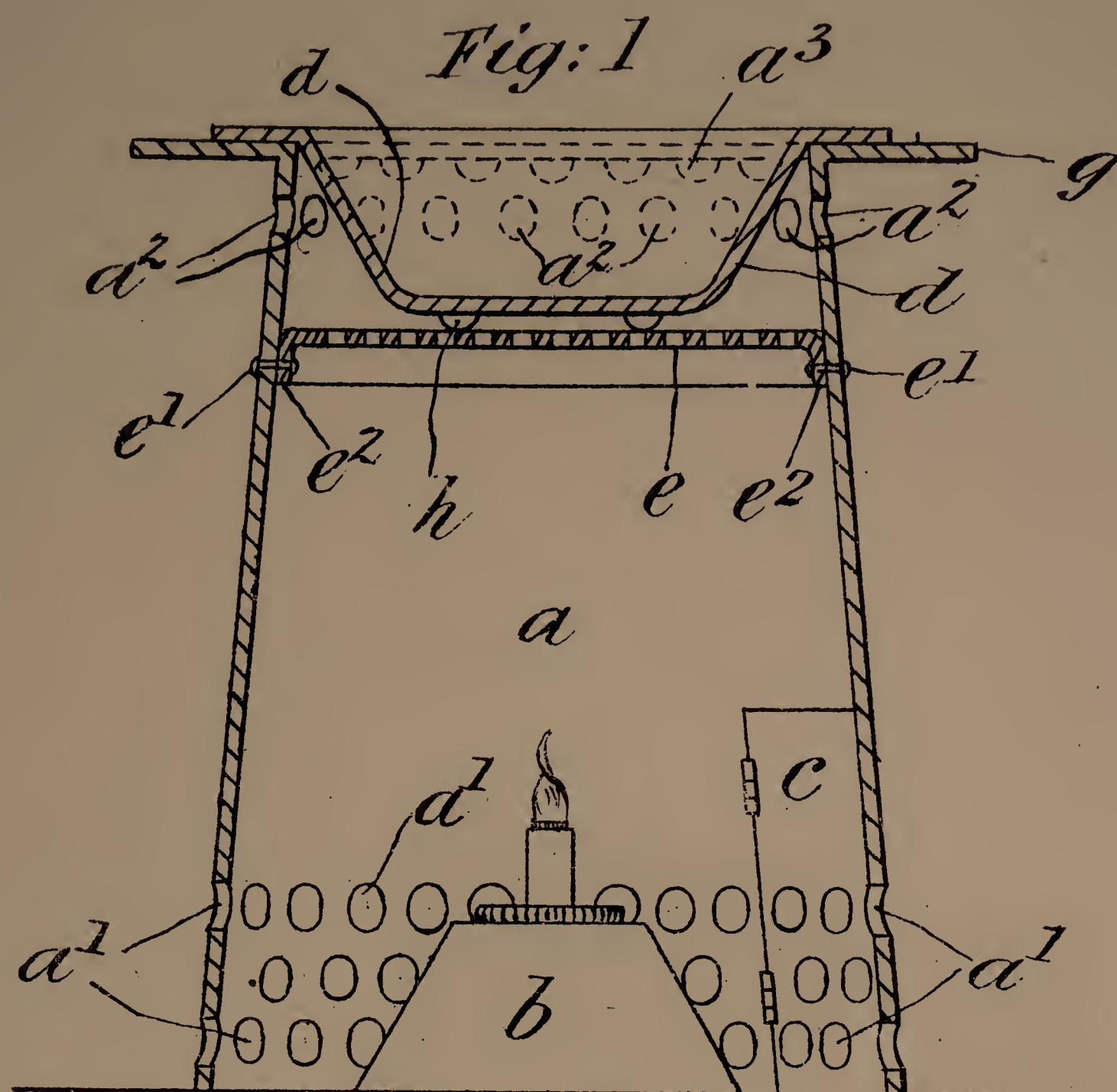
Dated this 4th day of October 1904.

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HARRIS & MILLS,
23 Southampton Buildings, London, W.C.,
Agents.

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[This Drawing is a reproduction of the Original on a reduced scale.]

